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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/708,401	03/01/2004	Feng-Fu Lin	ALIP0038USA	2400

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EXAMINER	
CHAPMAN JR, JOHN E	
ART UNIT	**PAPER NUMBER**
2856	

DATE MAILED: 10/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/708,401	LIN ET AL.	
	Examiner	Art Unit	
	John E. Chapman	2856	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 October 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4 and 6-16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4 and 6-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on October 3, 2005 has been entered.

2. Claims 1-4, 6-8 and 16 objected to because of the following informalities: In claim 1, step (d) should not follow step (c), since it logically precedes it. It is suggested that "(d) generating the CE signal of step (b)" in line 15 be changed to --wherein the CE signal of step (b) is generated--. A similar change should be made in claim 16. Appropriate correction is required.

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 1-4 and 6, 8-13, 15 and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Okazaki et al. (6,424,606).

Okazaki et al. disclose a method for detecting an unbalanced disc 105 wherein the speed is set to the resonant frequency of the tracking actuator in the lens assembly 200,

which actuator comprises a coil (col. 4, line 59). Vibration caused by the unbalanced disc 105 is detected and compared with a predetermined vibration value (threshold value) to determine if the vibration is within the vibration value limit. See, for example, column 10, lines 7-16. The vibration detect signal comprises a central error (CE) signal in that it indicates deviation of a laser spot 605 from a central position, as indicated in Figures 6A-6C.

With regard to generating the CE signal by calculating an intensity difference between a left region corresponding to an area of the inner portion of a track and a right region corresponding to an outer area of the track, Okazaki et al. notes that when the lens assembly 200 is tilted towards the outer area of the disc 105, the laser spot will be in the position 610 shown in Fig. 6B (column 11, lines 54-57); whereas when the lens assembly 200 is tilted towards the inner area of the disc 105, the laser spot will be in the position 615 shown in Fig. 6C (column 12, lines 1-4). Consequently, the region A+D of the photodiodes 210 comprises a "right region corresponding to an area of the outer diameter of the track" in that the laser spot 605 in Fig. 6A will move to the position 610 in Fig. 6B when the lens assembly 200 is tilted towards the outer area of the disc, and the region B+C comprises a "left region corresponding to an area of the inner diameter of the track" in that the laser spot 605 in Fig. 6A will move to the position 615 in Fig. 6C when the lens assembly 200 is tilted towards the inner area of the disc.

To the extent that Fig. 6 shows the track 140 running vertically in Figs. 6A-6C, such appears to be an obvious error in that tilting the lens assembly 200 towards the outer area of the disc 105, as shown in Fig. 6B, would not cause the laser spot to move along the laser track 140, as suggested by Fig. 6B, but rather would cause the laser spot to move

perpendicular to the laser track 140. Similarly, tilting the lens assembly 200 towards the inner area of the disc 105, as shown in Fig. 6C, would not cause the laser spot to move along the laser track 140, as suggested by Fig. 6C, but rather would cause the laser spot to move perpendicular to the laser track 140. Accordingly, it would have been obvious to one of ordinary skill in the art that the tracks 140 in Figs. 6A-6C should run horizontally through the region ABCD of the lens assembly 200.

The claims do not appear to preclude the use of a tracking error (TE) as a correction to the vibration detect signal, i.e., the central error (CE) signal. However, to the extent that the claims do preclude the use of a tracking error (TE) as a correction to the central error (CE) signal, it is well established that the omission of an element along with its function, where the remaining elements perform the same functions as before, involves only routine skill in the art. See *In re Kuhle,* 526 F.2d 553, 188 USPQ 7 (CCPA 1975); and *In re Karlson*, 311 F.2d 581, 136 USPQ 184 (CCPA 1963). Accordingly, merely to eliminate the TE signal from the vibration detect signal, along with its function of correcting the vibration detect signal for a tracking error, would have been obvious to one having ordinary skill in the art.

5. Claims 7 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okazaki et al.

Merely to eliminate the TE signal from the vibration detect signal, along with its function of correcting the vibration detect signal for a tracking error, would have been obvious to one having ordinary skill in the art. It is well established that the omission of an element along with its function, where the remaining elements perform the same

functions as before, involves only routine skill in the art. See *In re Kuhle,* 526 F.2d 553, 188 USPQ 7 (CCPA 1975); and *In re Karlson*, 311 F.2d 581, 136 USPQ 184 (CCPA 1963).

6. Applicant's arguments filed October 3, 2005 have been fully considered but they are not persuasive. Applicant argues that there is no error in Fig. 6 of Okazaki et al. in that the tracks 140 run vertically. Applicant argues that the orientation of the tracks in Fig. 6 is similar to that in Fig. 1E of Supino et al. (5,982,721) in which photosensor E is adjacent photosensors A, D and photosensor F is adjacent photosensors B, C, while photosensors E and F are located in a vertical fashion, i.e., along a data track as depicted in Fig. 6 of Okazaki et al. The problem with such an interpretation is that when the photodiodes are positioned to the left of the track's centerline, the tracking error signal (TES) is positive, as shown by +TES in Fig. 1E; whereas when the photodiodes are positioned to the right of the track's centerline, the tracking error signal is positive, as shown by -TES in Fig. 1E. That is, the side beams E and F (as well as the center beam) are shifted to the left in Fig. 1E when the photodiodes are positioned to the left of the track's centerline, and the beams are shifted to the right when the photodiodes are positioned to the right of the track's centerline. This is contrary to what shown in Okazaki et al., in which the beams move upward in Fig. 6B when the lens assembly is tilted towards the outer area of the disc, and move downward in Fig. 6C when the lens assembly is tilted towards the outer area of the disc. Consequently, the orientation of the photosensors with respect to the track centerline would appear to be more akin to that of

Ohta (5,909,414), in which the photosensors 115 and 116 in Fig. 4 are oriented with respect to track T3 in Fig. 3.

Regardless, applicant has failed to establish any clear difference between the invention and the prior art. In particular, applicant has failed to show that the method and/or system are in any manner different from the prior art. It is noted that, according to the applicant, if the reflected laser beam approaches the center of the optical disc 20, the left half region (areas A and D) will receive more reflected laser beam as shown in Fig. 3. See paragraph 18. But this seems to be precisely what Fig. 6C of Okazaki et al. shows, namely, when the reflected laser beam approaches the center of the optical disc 105 due to the lens assembly 200 being tilted towards the inner area of the disc, the half region (areas B and C) will receive more reflected laser beam. Similarly, applicant teaches that if the laser beam moves away from the center of the optical disc 20, the right half region (areas B and C) will receive more reflected laser beam as shown in Fig. 4. But this seems to be precisely what Fig. 6B of Okazaki et al. shows, namely, when the reflected laser beam moves away from the center of the optical disc 105 due to the lens assembly 200 being tilted towards the outer area of the disc, the half region (areas A and D) will receive more reflected laser beam. Applicant has failed to explain how, when applicant does precisely what the prior art does, applicant gets any different result. How is it that when applicant moves the beam towards and away from the inner area of the disc, the beam moves left and right with respect to a track (Figs. 3 and 4), but when Okazaki et al. moves the beam towards and away from the inner area of the disc, the beam moves up and down with respect to a track (Figs. 6B and 6C)?

Applicant further argues that the elimination of the TE signal from the vibration detect signal would not have been obvious to those skilled in the art, since Okazaki et al. repeatedly teaches that it is advantageous to subtract the TE signal. However, the fact that Okazaki et al. teaches that it is advantageous would have suggested that it is optional, though it would be disadvantageous to eliminate it. Accordingly, it would have been obvious to eliminate the TE signal whenever the advantage of subtracting the signal is not paramount.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John E. Chapman whose telephone number is (571) 272-2191. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams can be reached on (571) 272-2208. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

John E Chapman
Primary Examiner
Art Unit 2856